- Is a permit for a dry hydrant required by the state or a federal agency? If so, can the application for the permit be obtained at the county level?
- Does the hydrant location require certain water depth, composition of streambed or lake bottom, ease of digging, protection of hydrant during winter?
- Does this location pose a threat to terrestrial or aquatic wildlife species?
- Will the location survive winter temperatures?

The National Interagency Fire Center (NIFC, 2004) discusses the process of planning to insure adequate water supplies and distribution in the fire district. This booklet covers the design features and installation of dry hydrants.

Restoration Guidelines Following a Wildland Fire

Areas that generally burn hot are likely to have the greatest alterations in soil characteristics to the landscape (Graham 2003). These alterations include but are not limited to: (1) loss of surface soil organic matter, (2) reduced ground cover resulting in decreased infiltration of water and increased surface runoff and peak flows, and (3) the formation of pedestals, rills, and gullies.

The NFP and the Idaho Plan address rehabilitation and restoration of burned areas and fire-adapted ecosystems. Consider the following site restoration guidelines:

- Fill in deep and wide fire containment lines
- Water bar newly created roads or containment lines, as necessary, to prevent erosion
- Install sediment controls to prevent sedimentation of waterways
- Restore all fire staging areas with native seed mixes approved by BLM, NRCS, or other local experts
- Control all noxious weed invasions
- Evaluate the necessity to revegetate all or portions of the burn or areas impacted by fire suppression activities using native species by broadcast seeding, drilling, containerized stock or wildlings
- Encourage the use of plant stock from local collections of site-adapted stock
- Base decision to revegetate an area on inventories of affected areas for natural recovery that approaches pre-fire densities of native species
- Preclude off-road vehicle use in burned area for at least two growing seasons
- Continue monitoring until restoration is complete
- Conduct surveys of burned areas to assess damage to cultural resources.

Fire Prevention Programs – Public Education

FIREWISE – A Community-wide Outreach Program

The National Wildfire Coordinating Group (NWCG) sponsors the FIREWISE Program. Members of the NWCG are responsible for wildland fire management in the United States and are represented by the USDA-Forest Service, the Department of Interior, the National Association of State Foresters, the U.S. Fire Administration and the National Fire Protection

Association. FIREWISE promotes fire wise practices by 1) educating the public of the dangers of a wildfire in the area, 2) encouraging residents to take responsibility in reducing the risk of a wildfire and to create survivable space around their residence, and 3) increasing awareness of the natural role of low-intensity fires and the benefits of prescribed burning or occasionally managing natural wildland fires to achieve ecological benefits while maintaining firefighter and public safety as top priority. The estimated cost is $10,000.00 per program. See Websites For Homeowners. In addition, a new program titled "Red Rock – Green Rock" is available to homeowners. Basically the local fire department visits individual subdivisions and determines which homes are at risk (red rock placed on front porch) and which homes show good survivable space (green rock placed on front porch). This program works well by informing homeowners immediately and generally action is taken if the home has a red rock.

A Checklist for Homeowners

Many Idaho residents desire to live in rural areas adjacent to or surrounded by hazardous fuels. The fuels have the potential to ignite a wildland fire and possibly a structural fire. In some cases homeowners have little to no understanding of the risks to themselves or to the emergency personnel who must respond to these fires. It is the homeowner's responsibility to protect their property.

The following checklist was developed to aid Gooding County homeowners residing within subdivisions and additions. The checklist contains standard questions used by FEMA (2004) and the FIREWISE Program. These questions have been modified, based on earlier assessments of subdivisions and additions and interviews with homeowners and fire chiefs.

Table 38. A Checklist for Homeowners

Do you know your wildfire risk?
Learn about the history of wildfire in your area, local fire laws and building codes and protection measures. This information is available from but no limited to: 1) Shoshone District BLM office, 2) Fire District office , 3) county offices and, Fire Districts adjoining Gooding County. Consider having a professional inspect your property and offer recommendations for reducing the wildfire risk. Determine your Fire District's ability to respond to a wildfire. • Are ingress and egress roads to your property clearly marked? • Are the roads wide enough to allow passage by firefighting equipment? • Can the Fire District find your house (house no., grid location)?
What should I do if a wildfire threatens my neighborhood?
• Contact the fire department or district fire warden immediately • Close all windows, doors and other openings to the outside to prevent sparks from blowing inside • Locate family members and pets • Wear non-flammable cotton or wool clothing • If you have time, wet down the roof and the area adjacent to the house
Do you have an evaluation plan for your family?
Plan several alternate routes for family members in the event wildland or a structural fire. • Establish where young family members will immediately go in the event of a fire and in the absence of adult supervision. • Establish "staging areas" for family members and/or community/subdivision members in the event normal evaluation routes become blocked, especially if the ingress and egress road is limited, that is, one road in, one road out • Prepare your vehicle for evacuation.
Should I create 'survivable space' around my home?

Create a 30-foot safety zone around the house.

- Keep volume of vegetation in this zone to a minimum. If you live on a hill, extend this zone on the downhill side. The steeper the slope, the more open space you will need to protect hour home.
- Remove vines from the walls of the house
- Move shrubs and other landscaping away from the sides of the house
- Prune branches and shrubs within 15 feet of chimneys and stove pipes
- Remove tree limbs within 15 feet of the ground
- Thin a 15-foot space between tree crowns
- Replace highly flammable vegetation (e.g., juniper, sagebrush, pine) with lower growing, less flammable species
- Replace vegetation that has living or dead branches from the ground-level up (these act as ladder fuels for the approaching fire).
- Keep lawns mowed frequently
- Clear all areas of leaves, brush, dead limbs and fallen trees.

Create a second zone at least 100 feet around the house.

This zone should begin about 30 feet from the house and extend to at least 100 feet

- Reduce or replace as much of the most flammable vegetation as possible. If you live on a hill, you may need to extend the zone for several hundred feet to provide the desired level of safety.

When selecting landscaping materials, how do I make the right choices?

Choose plants that are acclimated to your area of the country. Avoid resinous varieties and look for those with a high amount of moisture in their leaves. Note that deciduous trees are generally less flammable than coniferous ones. Check with your State Foresters office, or with your extension agent because some areas of the country have regional plant lists available. A healthy, well-maintained landscape is very important, so:

- Space plants carefully
- Prune them regularly
- Remove dead leaves and other litter from around trees, shrubs and vines
- Provide the landscape with sufficient moisture.

Are combustible materials away from the house?

Stack firewood 100 feet away and uphill from the house. Keep gas grills and propane tanks at least 15 feet from the house.

Are porches enclosed underneath?

Any porch, balcony or overhang with exposed space underneath is fuel for an approaching fire. Overhangs ignite easily by flying embers and by the heat and fire that gets trapped underneath. If vegetation is allowed to grow underneath or if the space is used for storage, the hazard is increased significantly.

- Clear all flammable materials away from underneath sun decks and porches.
- Extend ½-inch mesh screen from all overhangs down to the ground.
- Enclose wooden stilts with non-combustible material such as concrete, brick, rock, stucco or metal.
- Use non-combustible or fire-resistant materials for new porch or sun deck construction. If possible, build the structure to the ground so that there is no space underneath.

Are eaves and overhangs enclosed?

Are house vents covered with wire mesh?

Is the roof constructed of non-flammable materials?

The roof is especially vulnerable in a wildfire because firebrands and flaming debris can travel great distances, land on your roof, and start a new fire.

- Avoid flammable roofing materials such as wood, shake and shingle.
- Use fire resistant materials such as single-ply membranes, fiberglass shingles, slate, metal, and clay and concrete tile.
- Keep gutters clean of debris.
- Apply SHINGLE SAFE Fire Retardant on wood shake shingles.

My wood-shake roof was treated with fire retardant some years ago. How can I tell if retardant needs to be reapplied?

Chop a small piece of wood from the edge of one of the shakes and hold a lighted match under it. If the shake ignites, roof retardant needs to be reapplied.

Are chimneys and stovepipes covered with spark arrestors?

Install spark arrestors on all chimneys, stovepipes and vents for fuel-burning heaters. Check with the Fire District for spark arrestor specifications

- Use non-combustible or fire-resistant materials for new chimney construction and follow chimney-building specifications.

Is the house siding fire resistant?

Use fire-resistant materials in the siding of your home, such as stucco, metal, brick, cement shingles, concrete and rock. Existing wood siding can be treated with UL-approved fire retardant chemicals (not a permanent fix).

Have windows been treated to reduce the risk?

Windows allow radiant heat to pass through and ignite combustible materials inside. Dual-or triple-pane thermal glass, and fire resistant shutters or drapes, help reduce the wildfire risk.

- Close shutters or drapes while away from home to prevent the ignition of combustible materials and to keep home warmer in the winter and cooler in the summer.

Table 39. Mitigation Summary for Gooding County.

Hagerman and Gooding Fire District*	Wendell and Bliss Fire District**	Potential Problems/Risks	Responsible Agency/Recommended Mitigation
H		Transition from wideband to narrowband with communications equipment and operations has the potential to adversely affect firefighter safety and performance, specifically in the initial and extended action environment (NIFC, 2004).	Federal, State, Fire Districts • Accelerate local conversion to narrowband to match Federal timeline • Firefighters and aerial resources must withdraw from fire operations activities if positive communication with their forces, supervisor, or adjoining forces are compromised • Ensure local frequency management plans are in place and understood to support initial and extended action activities, and include contingencies for cooperator and aviation resources • If communication problems become an issue, the fall back position is to revert to wideband mode • Report problems with specific details through SAFENET or SAFECOM reporting systems
H		Hazardous fuels within subdivisions	Homeowners • Request grant funding to purchase an industrial chipper • Create survivable space • Host cleanup days and offer incentives for removal of hazardous fuels (chipping services, free dump days at the landfill) • Place evacuation plan map and map of readily available water sources for each subdivision within a lockable container and positioned at the entrance of subdivision • Place safety flags on standpipes used for drafting at each water source • Construct fuel breaks at designated locations (see map) • Maintain fuel breaks (periodic mowing, greenstripping, noxious and invasive weed removal (see Environmental Effects, p. 34) • Widen roads for better ingress and egress
		No RedZone program	Federal, Fire Districts, Home owners • Conduct surveys identifying potential hazards a home may pose to firefighters during a wildland fire • Conduct surveys identifying measures

H			a home owner will take to reduce risks of their home igniting during a wildfire • Conduct surveys identifying water sources, access concerns (bridges/road width), and utility location information needed by firefighters • Mail surveys to homeowners for review. Include Firewise documents in the mailing to aid the homeowner in creating survivable space around the home
H		Reduce human-caused fires	County, Fire Districts • Work with its federal cooperators to develop grass roots fire prevention efforts to reduce the occurrence of person caused fire ignitions through public education and participation in community events. • Develop partnerships with local businesses to promote fire prevention. Some examples are Sporting goods dealers will display materials relating to campfires and outdoor activities, Landscaping companies will display information relating to survivable space and fire resistant plants, Agriculture related businesses will display information related to agricultural burning, Off road vehicle dealers will display information related to fire prevention as it relates to OHV • Cooperate with Union Pacific Railroad in fuel reduction programs
H		Lack of survivable space around homes	Homeowners • **See Table 38: A Checklist for Homeowners**
H		No enforcement of state regulations regarding burning permits outside of city limits	Federal, State DEQ, County, Fire Districts • Call local fire department before you burn • Educate public concerning the State of Idaho's burn policy • Create county ordinance regarding burning • Notify sheriff's office of controlled burns • Coordinate with state and federal agencies using fire restrictions
H (Hagerman		Lack of National Fire Protection Association (NFPA) standards for entire county. **Note:** The cost of enforcement is prohibitive for small rural communities	• Adopt all or portions of, 2003 NFPA 1141 Standard for Fire Protection in Planned Building Groups (**See Appendix A**) • Adopt all or portions of, 2003 NFPA 1143 Standard for Wildland Fire

Fire District) M (Gooding Fire District)		(personal communication – Gooding County fire chiefs).	Management (**See Appendix A**) • Adopt all or portions of 2002 NFPA 1144 Standard for Protection of Life and Property from Wildfire (**See Appendix A**) • Fire Districts should meet and discuss the current system of building permit review and identify problems that exist and implement solutions
H (Hagerman Fire District) M (Gooding Fire District)		Lack of detailed information for facility modification	Fire Districts • Need information on sprinkler systems • Exhaust venting systems • Smoke and fire alarm systems and emergency facility generators • Details of occupancy and frequency of use of existing facilities
H (Hagerman Fire District) L (Gooding Fire District)		Lack of Mutual Aid Agreements and fire protection for private property in Open Areas	County, Landowners • Create new fire protection district for open areas • Develop Mutual Aid and Cooperative agreements with landowners and fire districts. • Check the legal issues associated with spending fire district funds on fires in open areas.
H (Hagerman Fire District) L (Gooding Fire Distric6)		Lack of agreements with landowners to allow access to irrigation mainline values	BLM, Fire Districts • Cooperate with landowners by obtaining a written agreement allowing access to irrigation wells or pipes. This would require proper pipefitting on tenders and engines.
H (Hagerman Fire District) L (Gooding Fire District)		Lack of detailed firefighting vehicle acquisition programs	Fire Districts • Comply with NFPA 1901 or 1906 standards • Need total number of vehicles in fleet • Mileage or hours of engine operation and total number of vehicles in this category • Incident activities (call volume) • Vehicle equipment status and condition
M (Hagerman Fire District)		Inadequate permanent water supply and drafting locations	County, Fire Districts • Pursue grant opportunities to purchase additional water tenders • Request grant funding to develop dry hydrant systems and drafting locations as delineated (see map) • Require storage tanks (cisterns) and/or hydrant systems in new subdivisions
L (Hagerman)		Lack of detailed training records for individual firefighters	Fire Districts • Conduct instructor-led training that results in national or state certification in basic, operational level firefighting, operational level rescue, driver

			training or first responder training or officer training
L (Hagerman Fire District)		No power pole protection	County • Install fireproof sleeves around power poles at designated locations. This will require cooperation and coordination with Idaho Power

*Fire Chief Priority Rating
**No Fire Chief Priority Rating

WEBSITES FOR HOMEOWNERS

FIREWISE programs
http://www.firewise.org/

Red Zone Software
http://www.redzonesoftware.com/index2.html

FireWars/NOVA
http://www.pbs.org/wgbh/nova/teachers/programs/2908_fire.html

Taking a Stand: Pros and Cons of Forest Fires
http://www.thirteen.org/wnetschool/origlessons/fire/index.html

FEMA for Kids
http://www.fema.gov/kids/wldfire.htm

Living with Fire
http://www.fs.fed.us/rm/fire_game/

Pikes Peak Wildfire Prevention Partners
http://www.ppwpp.org/

Smokey Bear
http://www.smokeybear.com/

Sparky's Home Page
http://www.sparky.org/

Woods on Fire
National Institute for Science Education and the National Science Foundation
http://whyfiles.news.wisc.edu/018forest_fire/index.html